

CLAIMS

1. A hot filled plastic container comprising:
a bell portion, a body portion and a base;
wherein said bell portion includes a neck for passage of a hot filled food product therethrough and a shoulder portion between said neck and said body portion; and
wherein said body portion is generally rectangular in transverse cross section and includes four panel sections, wherein each of said panel sections is flat and flexible, each said panel section exhibiting flexibility to move between a bowed and a planar configuration in response to temperature changes experienced by the container.
2. The plastic container of Claim 1 wherein each panel section is coupled to the adjoining panel section by a smooth, rounded corner.
3. The plastic container of Claim 1 wherein said panel sections have no ribs, no stress absorbing strips, no raised areas and no recessed areas.
4. The plastic container of Claim 1 further comprising a label engaging said panel sections.
5. The plastic container of Claim 4 wherein said label extends from the bottom of said neck to said base, including said panel sections.

6. The plastic container of Claim 1 wherein said container is a blow-molded polypropylene container.

7. The plastic container of Claim 6, wherein said container is a beverage container which contains a hot filled beverage.

8. The plastic container of Claim 1 wherein said container has a top load rating of at least 80 pounds at room temperature or below.

9. The plastic container of Claim 1 wherein two opposing side panels have a mold line therein.

10. A multilayer plastic container comprising at least one wall which defines an interior surface and an exterior surface of the container, wherein said wall is formed of seven layers with a first layer of polypropylene, a second layer of adhesive, a third layer of ethylene-vinyl alcohol polymer, a fourth layer of adhesive, a fifth layer of regrind, a sixth layer of adhesive, and a seventh layer of polyamide and wherein said first layer of polypropylene forms the exterior surface of the container and said seventh layer of polyamide forms the interior surface of the container.

11. The plastic container of Claim 10 wherein said container is a hot fill plastic container.

12. The plastic container of Claim 11 wherein said container is a blow-molded container.

13. The plastic container of Claim 10 wherein said fifth layer of regrind forms at least 70% of said wall.

14. The plastic container of Claim 13 wherein said first layer of polypropylene forms approximately 20 % of said wall.

15. The plastic container of Claim 14 wherein said third and seventh layers each form approximately 2% of said wall.

16. A multilayer plastic container formed of a polymeric material, wherein said polymeric material comprises a layer of polypropylene, a layer of ethylene-vinyl alcohol polymer adhered to said layer of polypropylene, a layer of regrind adhered to said layer of ethylene-vinyl alcohol polymer, and a layer of amorphous nylon adhered to said layer of regrind, wherein said layer of amorphous nylon forms the interior surface of the container.

17. The plastic container of Claim 16 wherein said container is a hot fill plastic container.

18. The plastic container of Claim 16 wherein said layer of regrind forms at least 70% of said polymeric material.

19. The plastic container of Claim 18 wherein said layer of polypropylene forms approximately 20 % of said polymeric material.

20. The plastic container of Claim 19 wherein said layer of ethylene-vinyl alcohol polymer and said layer of amorphous nylon each form approximately 2% of said polymeric material.

21. A hot filled plastic container comprising
a bell portion, a body portion and a base;
wherein said bell portion includes a neck for passage of a hot filled food product therethrough and a shoulder portion between said neck and said body portion, and wherein said body portion is generally rectangular in transverse cross section and includes four panel sections, wherein each of said panel sections is flat and flexible, each said panel section exhibiting flexibility to move between a bowed and a planar configuration in response to temperature changes experienced by the container;

wherein said container is formed of a polymeric material, said polymeric material having a layer of polypropylene, a layer of ethylene-vinyl alcohol polymer adhered to said layer of polypropylene, a layer of regrind adhered to said layer of ethylene-vinyl alcohol polymer, and a layer of amorphous nylon adhered to said layer of regrind; and

wherein said layer of polypropylene forms an exterior surface of the container and said layer of amorphous nylon forms an interior surface of the container which is in contact with the hot filled food product.

22. The plastic container of Claim 21 wherein said panel sections have no ribs, no stress absorbing strips, no raised areas and no recessed areas.

23. The plastic container of Claim 21 further comprising a label engaging said panel sections.

24. The plastic container of Claim 23 wherein said label extends from the bottom of said neck to said base, including said panel sections.

25. The plastic container of Claim 21 wherein said container is a blow-molded polypropylene container.

26. The plastic container of Claim 25, wherein said container is a beverage container which contains a hot filled beverage that includes at least 10 weight percent of a citrus or fruit juice.

27. The plastic container of Claim 27, wherein said hot fill beverage includes approximately 50 weight percent of a citrus or fruit juice.

28. The plastic container of Claim 26, wherein said hot fill beverage includes fruit or citrus juice and a dairy product.

29. The plastic container of Claim 21 wherein said container has a top load rating of at least 80 pounds at room temperature or below.

30. The plastic container of Claim 21 wherein two opposing side panels have a mold line therein.

31. The plastic container of Claim 21 wherein said layer of regrind forms at least 70% of said polymeric material.